

**B.Sc. FISHERIES BIOLOGY SYLLABUS UNDER CBCS**  
(With effect from 2016-2017)  
**II - SEMESTER**  
**PAPER II -TAXONOMY AND ANATOMY OF FISHESLIMNOLOGY (Theory)**

**Max. Marks: 60**

**UNIT I - Classification of fishes**

- 1.1. Classification of fishes: Major groups up to subclass and their important characters.
- 1.2. Skin: Structure and function of skin in fishes.
- 1.3. Scales: Structure of placoid, cycloid, ctenoid, cosmoid and ganoid scales.
- 1.4. Fins: Structure and types of fins.

**UNIT II - Feeding habits of fishes**


- 2.1. Age and Growth: Methods of determination of age; Methods for studying growth, Length-Weight relationship and Condition factor.
- 2.2. Natural food of fishes-types of food, herbivorous, carnivorous, omnivorous fishes.
- 2.3. Feeding habits - predators, grazers, strainers, suckers and parasites;
- 2.4. Feeding adaptations and stimuli for feeding.

**UNIT III - Digestive, Respiratory and excretory systems in fishes**

- 3.1. Respiratory system: Structure of gills and accessory respiratory organs.
- 3.2. Cardiovascular system: Structure of cardiovascular system in fishes.
- 3.3. Nervous system: Structure and function of brain and cranial nerves.
- 3.4. Excretory system and Osmoregulation: Structure and function of kidneys in fishes.

**UNIT IV - Endocrine and reproductive systems in fishes.**

- 4.1. Endocrine system: Structure and function of pituitary gland, thyroid gland, ultimobranchial glands,
- 4.2. Chromaffin tissue, adrenocortical tissue and corpuscles of stannous.
- 4.3. Reproductive system: Reproductive structures in teleosts; maturity stages of gonads.
- 4.4. Fecundity and Gastro, Gonado-somatic Index (GSI).

  
Professor & Chairman  
Board of Studies in Zoology  
Department of Zoology  
Kakatiya University  
Warangal - 506 007

## REFERENCE BOOKS

1. Bond E. Carl. 1979. *Biology of Fishes*, Saunders.
2. Halver JE. 1972. *Fish Nutrition*. Academic Press.
3. Hoar WS and Randall DJ. 1970. *Fish Physiology*, Vol. I-IX, Academic Press, New York.
4. Lagler KF, Bardach, JE, Miller, RR, Passino DRM. 1977. *Ichthyology*, 2<sup>nd</sup> Ed. John Wiley & Sons, New York.
5. Lovell J. 1989. *Nutrition and Feeding of Fish*. Van Nostrand Reinhold, New York.
6. Moyle PB and Joseph J. Cech Jr. 2004. *Fishes: An Introduction to Ichthyology*. 5<sup>th</sup> Ed. Prentice Hall.
7. Nikolsky GV. 1963. *Ecology of Fishes*, Academic Press.
8. Norman JR and Greenwood PH. 1975. *A History of Fishes*, Halsted Press.
9. Potts GW and Wootten RJ. 1984. *Fish Reproduction: Strategies and Tactics*, Academic Press.

## Practicals-40 Marks

1. Morphometric & meristic data of selected food fishes:

*Catla catla*,

*Labeo rohita*

*Cat fishes*,

*Clarius batracus*,

*Channa striata etc.*,

2. Identification of types of scales and fins
3. Digestion system of fishes - Dissection
4. Wabarian Osicle - Dissection



Professor Dr. S. S. S. S.  
Board of Studies in Fishery  
Department of Zoology  
Kannada University  
Warananasi, Dharwad